

LOW K DIELECTRIC FILM DEPOSITION PROCESS

ABSTRACT OF THE DISCLOSURE

5 A process of depositing a low k dielectric film on a substrate includes using plasma enhance chemical vapor deposition to deposit a hydrogenated oxidized silicon carbon film. The process includes flowing a precursor gas containing Si, C, H and an oxygen-providing gas into the PECVD chamber. The precursor gas and the oxygen-providing gas are substantially free from nitrogen. The oxygen-providing gas is selected from the group consisting of oxygen, carbon monoxide, carbon dioxide, ozone, water vapor and a combination of at least one of the foregoing.